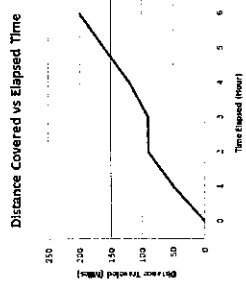
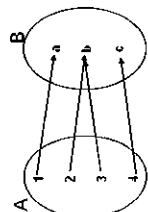
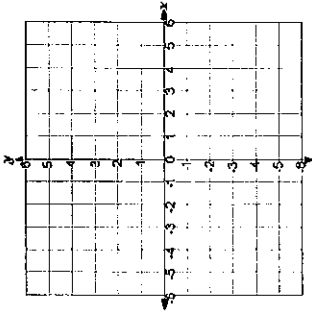


# ALGEBRA SPIRAL REVIEW

<p><b>Label each section of the graph.</b></p>  <p><b>Sketch a graph of the situation:</b> The amount of water in a cloud as it rains.</p>	<p><b>Is the relation a function?</b></p>  <p><b>Find the GCF of the terms and factor.</b>  <math>2x+6</math> _____  <math>a^3 - 5a</math> _____  <math>8x^5 + 24x^2</math> _____  <math>3b^6 + 18b</math> _____</p> <p><b>Write in scientific notation.</b>          2.45 _____          0.00082 _____          300,700,000 _____  <math>0.67113 \times 10^{-7}</math> _____          80 _____</p>	<p><b>Write a linear function for the table.</b></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Time worked (h)</th> <th>Amount earned</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>15</td> </tr> <tr> <td>6</td> <td>18</td> </tr> <tr> <td>7</td> <td>21</td> </tr> <tr> <td>8</td> <td>24</td> </tr> </tbody> </table> <p><b>Make a function table for the equation.</b> <math>f(n)=4x+7</math></p>	Time worked (h)	Amount earned	5	15	6	18	7	21	8	24	<p><b>Simplify the expression.</b></p> $\frac{w^2 + 7w}{w^2 - 49}$ $\frac{a^2 + 2a + 1}{5a + 5}$ $\frac{m + 4}{m^2 + 2m - 8}$ $\frac{5 - 4n}{4n - 5}$ $\frac{12 - 4t}{t^2 - 2t - 3}$ $\frac{4m - 8}{4 - 2m}$ $\frac{2s^2 + s}{s^3}$ $\frac{m^2 + 7m - 12}{m^2 + 6m + 8}$
Time worked (h)	Amount earned												
5	15												
6	18												
7	21												
8	24												
<p><b>Find the x and y-intercepts of the lines.</b>  <math>2x-6y=10</math> _____  <math>4x+7y=11</math> _____</p> <p><b>Find the slope of the points.</b>  <math>(5,-2), (-3,-1)</math> _____  <math>(9,6), (-2,0)</math> _____  <math>(7,8), (3,5)</math> _____</p> <p><b>Solve.</b>          7, 14, 21, 28, _____, 42          What's the pattern? _____          What would be the 10th term? _____</p> <p>3, 4, 6, 9, _____, 18, 24          Find the 11th term. _____</p>	<p><b>Solve.</b>          A fruit vendor is selling apples and pears. The first day the vendor sold 13 apples and 8 pears, making a total of \$8.50. The next day, the vendor sold 9 apples and 9 pears for a total of \$6.75. How much does the vendor charge for one apple and for one pear?</p> <p>Apple: _____ Pear: _____</p> <p><b>Write the equation in point-slope form.</b>  <math>(-5, 1)</math> <math>m=4</math> _____  <math>(9, -7)</math> <math>m=-2</math> _____</p>	<p><b>Write an equation of a line that is parallel.</b>  <math>y=5x+5</math>; <math>(3,-2)</math> _____  <math>y=-8x-3</math>; <math>(6,9)</math> _____</p> <p><b>Write an equation of a line that is perpendicular.</b>  <math>y=-\frac{1}{4}x+11</math>; <math>(-7,-7)</math> _____  <math>y=\frac{3}{4}x-8</math>; <math>(4,1)</math> _____</p> <p><b>Through:</b> <math>(6,2)</math> <b>Parallel to:</b> <math>y=4x+3</math></p>	<p><b>Simplify the radical.</b></p> $\sqrt{125n}$ $\sqrt{147m^3n^3}$ $\sqrt{200m^4n}$ $2\sqrt{8p^2q^3r}$ $-3\sqrt{24a^4b^2c^3}$ $6\sqrt{75mp^2q^3}$ $-4\sqrt{216x^2y^2z}$										
M O N D A Y	T U E S D A Y												

**Solve by graphing.**  
 $y = 4x - 6$     $y = 2x + 1$



( 1, 3 )

**Write in scientific notation.**

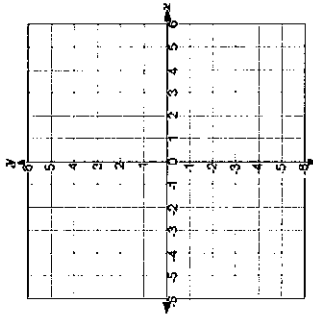
.2225 \_\_\_\_\_  
 9,000,000 \_\_\_\_\_  
 7.2 \_\_\_\_\_  
 100 \_\_\_\_\_  
 0.573 \_\_\_\_\_

**Write in standard form.**

$3.555 \times 10^4$  \_\_\_\_\_  
 $6.2 \times 10^{-8}$  \_\_\_\_\_  
 $1.99996 \times 10^0$  \_\_\_\_\_  
 $(4 \times 10^2)(2.5 \times 10^3)$  \_\_\_\_\_  
 $\frac{3 \times 10^7}{7 \times 10^3}$  \_\_\_\_\_

**Write an equation in slope-intercept form.**  
 (4,6), (-7,3) \_\_\_\_\_

**Graph the system of inequalities.**  
 $y > 6x - 2$     $y \geq -4x + 8$



**Factor the expression.**

$a^2 + 45 + 9$  \_\_\_\_\_  
 $x^2 + 4x + 8$  \_\_\_\_\_  
 $d^2 - 100$  \_\_\_\_\_  
 $y^2 - 32$  \_\_\_\_\_  
 $x^2 + 10x + 5$  \_\_\_\_\_

**Simplify the radicals.**

$\sqrt{\frac{5}{16}}$  \_\_\_\_\_  
 $\sqrt{\frac{d^6}{49}}$  \_\_\_\_\_  
 $\sqrt{\frac{4}{5}}$  \_\_\_\_\_  
 $\frac{3}{\sqrt{10}}$  \_\_\_\_\_  
 $\sqrt{\frac{5}{8}}$  \_\_\_\_\_  
 $\sqrt{\frac{3}{x}}$  \_\_\_\_\_  
 $\sqrt{\frac{8m^3}{5n}}$  \_\_\_\_\_  
 $\sqrt{\frac{11}{36}}$  \_\_\_\_\_  
 $\sqrt{\frac{7}{25x^2}}$  \_\_\_\_\_  
 $\sqrt{\frac{7}{3}}$  \_\_\_\_\_  
 $\frac{5}{\sqrt{7}}$  \_\_\_\_\_  
 $\frac{7}{\sqrt{12}}$  \_\_\_\_\_  
 $\frac{2\sqrt{3}}{\sqrt{10}}$  \_\_\_\_\_  
 $\sqrt{\frac{24x^3}{7y}}$  \_\_\_\_\_

W E D N E S D A Y

**Solve.**

(x-3), (x+9) \_\_\_\_\_  
 (a+8), (a+5) \_\_\_\_\_  
 (d-2), (d-4) \_\_\_\_\_

**Solve.**

$(13a^3 - 7a^2 + 11) + (5a - 16 + 3a^2)$  \_\_\_\_\_

**Write an equation of the line in slope-intercept form.**  
 (-2,8), (-4,-4) \_\_\_\_\_

**Find the slope.**

(9,-4), (3,2) \_\_\_\_\_  
 (-5,-11), (6,6) \_\_\_\_\_  
 (8,0), (1,15) \_\_\_\_\_

**Solve using substitution.**

$2x + y = 20$  \_\_\_\_\_  
 $6x - 5y = 12$  (     ,      )

**Find the x and y-intercepts of the line.**

$-9x + 3y = 18$  \_\_\_\_\_  
 $5x - 8y = 13$  \_\_\_\_\_

**Simplify.**

$(2 \times 10^{-3})^3$  \_\_\_\_\_  
 $(4 \times 10^8)^2$  \_\_\_\_\_  
 $(4)^5 \cdot (4)^{-5}$  \_\_\_\_\_  
 $(x^3)^3 \cdot x^5$  \_\_\_\_\_  
 $(-6x^2y)^4$  \_\_\_\_\_

**Complete the table, and write a rule for the table.**

	9	81
	18	324
	27	
	45	1296

**RULE:** \_\_\_\_\_

**Simplify the radicals.**

$\sqrt{75}$  \_\_\_\_\_  
 $\sqrt{80}$  \_\_\_\_\_  
 $\sqrt{288^2}$  \_\_\_\_\_  
 $\sqrt{448x^3}$  \_\_\_\_\_

**Solve.**

$(2x - 2) + (5x^2 + 3 - 7x)$  \_\_\_\_\_  
 $(9n^2 + 4) - (3n + 3)$  \_\_\_\_\_  
 $(6n + 3)^5$  \_\_\_\_\_  
 $(4x - 9^4)^2$  \_\_\_\_\_  
 $(7a + 2)(3a - 8)$  \_\_\_\_\_  
 $5x^2(x - 6y)$  \_\_\_\_\_  
 $(5n - 2m)(4n^2 - 3m + 7)$  \_\_\_\_\_

T H U R S D A Y